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(54) POLYMER PHOSPHOR AND POLYMERIC LUMINESCENT ELEMENT MADE BY USING IT (57)Abstract:

PROBLEM TO BE SOLVED: To provide a triarylamine based polymer phosphor which is excellent in e.g. the quantum efficiency of fluorescence and the luminous efficiency of an element made therefrom.

SOLUTION: This polymer phosphor contains repeating units represented by formula (1) (wherein Ar1 and Ar2 are each arylene or a divalent heterocyclic ring group; Ar3 is an aryl group having one or more substituents, through nuclear substitution, represented by the formula (2): -Y-Ar4 [wherein Ar4 is an aryl, a monovalent heterocyclic ring group or a monovalent aromatic amine group; and Y is -CR3=CR4- (wherein R3 and R4 are each H, an alkyl, an aryl, a monovalent heterocyclic ring group or cyano) or $-C \equiv C-1$, or a monovalent heterocyclic ring group having one or more substituents, through nuclear substitution, represented by the formula (2); X is -CR1=CR2- (wherein R1 and R2 are each H, an alkyl, an aryl, a monovalent heterocyclic ring group or cvano) or -C≡C-; and n is 0 or 1} and has visible fluorescence in a solid state.

$$-Ar_1 - N - Ar_2 - (X)_n -$$

$$+ Ar_3$$
(1)